

Abstract

Method for reproducing direct currents, and a DC/DC converter for carrying out the method

The invention describes a method for reproducing direct currents, in particular for use in DC switchgear, and a DC/DC converter for carrying out the method.

There is a requirement for low-voltage switchgear for the primary direct current to be measured as far as possible from the system, that is to say without providing external energy from an additional energy source which provides an auxiliary voltage, or at least with an energy source having only a low power level.

With the present invention, the current signal which is supplied from the secondary winding of an iron core on which the current to be measured flows through a primary winding is integrated, and the integrated current value is supplied to a measurement device or to a tripping circuit of a switching device, with the integrated current value being trimmed at predetermined time intervals by determining the primary current to be measured with the assistance of a magnetic field sensor for measuring the magnetic field in the iron core, using the compensation method, and by the integrated current value being corrected to this value.

The method manages with only a fraction of the energy required by previously known DC/DC converters, since the compensation method is carried out only at time intervals in order to compensate for the drift in the current value determined using the integration method.